

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/054,094	YANG, GEORGE L.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Lana N Le	2685	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 4/15/05.
2. ☒ The allowed claim(s) is/are 21-27 and 35-38.
3. ☒ The drawings filed on 4/15/05 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |                                                                                                                     |                                                                                        |
|---------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                         | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                    |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|                                                                                                                     | 9. <input type="checkbox"/> Other _____.                                               |

### **EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.
2. Authorization for this examiner's amendment was given in a telephone interview with applicant, George Yang, on 06/08/05.
3. The application has been amended as follows:

In the Claims:

- cancel restricted claims 28-34.

### **REASON FOR ALLOWANCE**

4. The examiner's amendment is needed to put the case in condition for allowance.
5. Claims 21-27 and 35-38 are allowable over the cited prior art.
6. The following is an examiner's statement of reasons for allowance:

Regarding independent claim 21, Baldwin et al disclose an automatic gain control circuit (fig. 6 and hereafter) comprising:

an amplifier (BB AGC amplifier 307) having at least a received signal (input from LPF block 305; see figure 6; col 14, line 61 - col 15, line 13) and an analog gain control signal ("GAIN ADJUST" input; figure 6) as separate inputs, wherein the amplifier (BB AGC 307) amplifies the received signal by an inherent amplification factor (col 20, lines

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19-23) to generate an amplified analog signal (output signal "GAIN ADJUST"; col 20, lines 23-26);

an analog-to-digital converter (ADC 313; col 20, lines 38-56) configured to convert the amplified analog signal into an amplified digital signal;

a signal strength estimator (signal power estimate block 315) configured to measure signal strength of the amplified signal (col 21, lines 4-13);

and updating the new gain adjusted signal (signal directed up to AGC DAC 297 via the AGC loop 345); and

a digital-to-analog converter (AGC DAC 297) configured to convert the digital gain control signal into the analog gain control signal (col 20, lines 23-26).

However, Baldwin and the cited prior art fail to further disclose:

a gain adjusting factor device configured to generate a gain adjusting factor;

a multiplier configured to multiply a digital gain control signal by the gain adjusting factor;

whereby the gain adjusting factor device generates the gain adjusting factor according to the signal strength, and

whereby the analog gain control signal determines the amplification factor.

Regarding independent claim 35, Baldwin et al (US 6,735,422) disclose a method for automatically varying a gain control signal for a receiver (fig. 6 and hereafter), comprising the steps of:

a) amplifying a receive signal (via BB AGC 307) according to an inherent adjustable amplification factor (in order to output signal R within a dynamic range to enable operation in the anticipated environment; col 20, lines 19-23) generate an amplified analog signal, where the adjustable amplification factor is determined by an analog gain control signal (analog "GAIN ADJUST" gain control signal after being converted to analog via AGC DAC 297);

b) converting (via ADC 313) the amplified analog signal from analog format into an amplified digital signal (col 20, lines 16-19, lines 38-56);

c) calculating signal strength of the amplified digital signal (via Signal Power Estimate 315; col 21, lines 4-13).

However Baldwin et al and the cited prior art fail to disclose or suggest:

d) generating a gain adjusting factor based on a predefined relation between signal strength and a reference gain adjusting factor;

e) updating a digital gain control signal by multiplying the digital gain control signal by the gain adjusting factor; and

f) converting the digital gain control signal to the analog gain control signal.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lana N Le whose telephone number is (703) 308-5836. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F Urban can be reached on (703) 305-4385. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Lana Le

June 21, 2005

Appn. Number 10/054,094 (George L. Yang) GAU/2685 Amnt. Contd.

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# Replacement Sheet

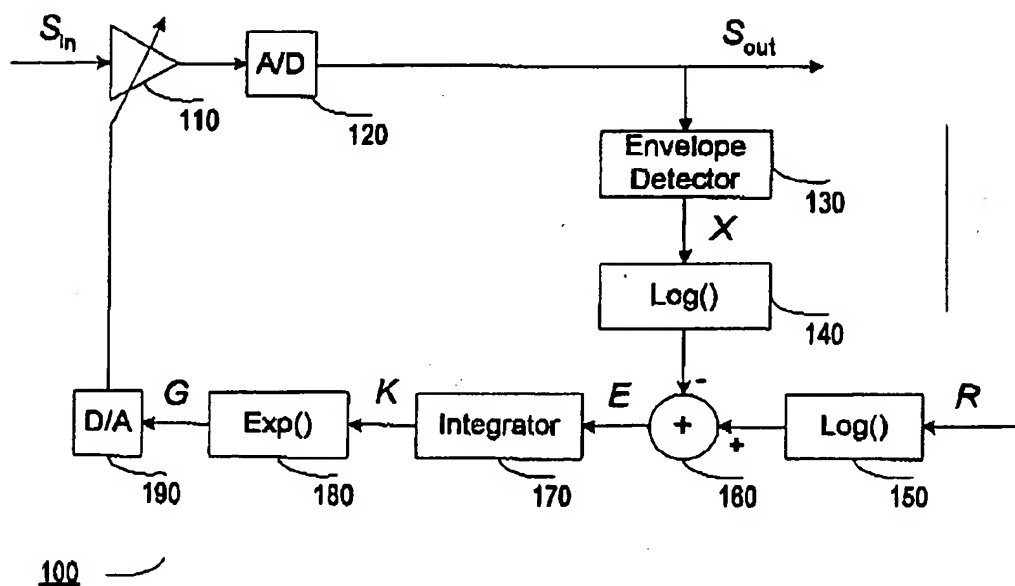


Fig. 1 (PRIOR ART)